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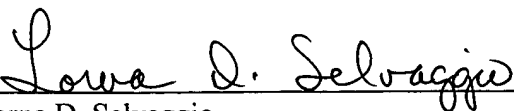
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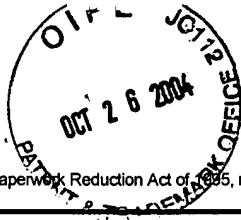
Petition Under 37 C.F.R. § 1.181(a)(1) and 37 C.F.R. § 1.53(e)(2) To Correct The Filing Date of The Application, Appendix A (copy of date-stamped postcard), Appendix B (copy of Notice of Incomplete Nonprovisoinal Application), and Appendix C (copy of originally filed claims).

Serial No.: 10/695,060

Filing Date: October 28, 2003

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Lorna D. Selvaggio



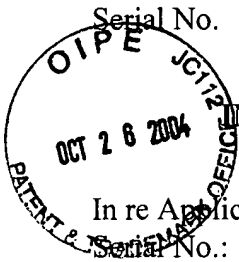
TRANSMITTAL FORM <i>(to be used for all correspondence after initial filing)</i>	Application Number	10/695,060	
	Filing Date	October 28, 2003	
	First Named Inventor	Seungkoo Kang et al.	
	Art Unit	1714	
	Examiner Name		
Total Number of Pages in This Submission	18	Attorney Docket Number	5003073-033US1

ENCLOSURES (check all that apply)		
<input type="checkbox"/> Fee Transmittal Form <input checked="" type="checkbox"/> Fee Attached - \$130.00 <input type="checkbox"/> Amendment / Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/ Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input checked="" type="checkbox"/> Petition & Appendices <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): Express Mail Certificate
<div>Remarks</div>		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT	
Firm or Individual name	Smith Moore LLP, Philip P. McGee, Reg. No. 30,919
Signature	
Date	October 26, 2004

CERTIFICATE OF TRANSMISSION/MAILING			
I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.			
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This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Seungkoo Kang, *et al.*

Serial No.: 10/695,060

: Group Art Unit: 1714

Confirmation No.: 5976

: Examiner: not assigned

Filed: 28 October 2003

For: **SuperAbsorbent Polymer**

Mail Stop PETITION
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

**PETITION UNDER 37 C.F.R. § 1.181(a)(1) and 37 C.F.R. § 1.53(e)(2)
TO CORRECT THE FILING DATE OF THE APPLICATION**

Sir:

This is a petition under 37 C.F.R. § 1.181(a)(1) and 37 C.F.R. § 1.53(e)(2) to correct the filing date of U.S. patent application Serial No. 10/695,060 from the granted date of April 5, 2004 to the original filing date of October 28, 2003. The April 5, 2004 filing date was granted in the Filing Receipt mailed 4/21/04, responsive to filing drawings under a Notice of Incomplete Nonprovisional Application. Applicants assert that the drawings were not necessary under 35 U.S.C. §113 (first sentence) for a filing date and that the filing date should be the original filing date. Consideration and grant of the petition is respectfully requested.

***Petition Under 37 C.F.R. § 1.181(a)(1) and 37 C.F.R. § 1.53(e)(2)
To Correct The Filing Date Of the Application***

Pursuant to 37 C.F.R. § 1.181(a)(1), applicants respectfully petition for the correction of the filing date of the above application to the original filing date of the application of

October 28, 2003 because the drawings filed under the Notice of Incomplete Nonprovisional

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Application were not necessary under 35 U.S.C. §113 (first sentence) for a filing date. This petition includes sufficient evidence to establish applicants' entitlement to the requested filing date including a copy of the date-stamped postcard receipt (Appendix A) and Notice of Incomplete Nonprovisional Application (Appendix B) wherein the filing date is listed as 10/28/03.

35 U.S.C. §113, first sentence requires that the applicant shall furnish a drawing where necessary for the understanding of the subject matter sought to be patented. The MPEP §601.01(f) states,

It has been USPTO practice to treat an application that contains at least one process or method claim as an application for which a drawing is not necessary for an understanding of the invention under 35 U.S.C. §113 (first sentence).

The present application as filed on October 28, 2003 includes process claims 30 and 31. Copies of the originally filed claims are attached. (Appendix C).

MPEP §601.01(f) further states "Other situations in which drawings are usually not considered necessary for the understanding of the invention under 35 U.S.C. §113 (first sentence) include

"(B) Articles made from a particular material of composition: where the invention consists in making an article of a particular material or composition, unless significant details of structure of arrangement are involved in the article claims."

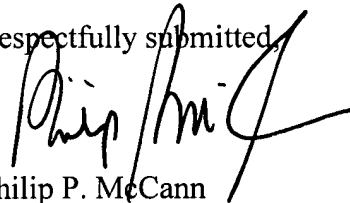
The claims of the present application are directed to a particular material of composition, superabsorbent polymer, as set forth in claim 1, for example, and absorbent composites including the superabsorbent polymer as set forth in claim 21.

The drawings included in the present application, Figures 1 and 2, are directed to a test method to measure GBP. Figures 1 and 2 and the specification describing the GBP Test, found in the present application beginning on page 23 at line 17 and continuing to page 26 line 19 are fully disclosed in 2002/0045869 that published April 18, 2002 and are not patentable matter in the present application.

This Petition is accompanied by a check in the amount of \$130.00 to cover the fee for this petition under 37 C.F.R. § 1.17(h). If any additional fees for the accompanying petition are required, the Commissioner is hereby authorized to charge them to Deposit Account 502190.

Applicants respectfully request the grant of the petition.

Respectfully submitted,



Philip P. McCann
Registration No. 30,919

SMITH MOORE LLP
P.O. Box 21927
Greensboro, NC 27420
(336) 378-5302

Date: October 26, 2004

File No.: 05003073-033US1

Mail Stop Patent Application
Assistant Commissioner for Patents
~~Washington, DC 20231~~
P.O. Box 1450
Alexandria, VA 22313-1450

Date: 10-28-03
SN/Pat. No. 713A
Confirmation No. 713A
Filing/Issue Date: _____
Applicant/Inventor: Kenn Smith
Title: Superabsorbent Polymer

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| <input checked="" type="checkbox"/> Specification pages <u>38</u> | <input type="checkbox"/> Notice of Appeal |
| <input checked="" type="checkbox"/> Number of claims <u>31</u> | <input type="checkbox"/> Appeal Brief |
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SMITH MOORE LLP - Docket No. 5003073-033451



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APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
10/695,060	10/28/2003	Seungkoo Kang	5003073-033US1

29737
 SMITH MOORE LLP
 P.O. BOX 21927
 GREENSBORO, NC 27420

CONFIRMATION NO. 5976

FORMALITIES LETTER



OC000000011838865

Date Mailed: 02/05/2004

NOTICE OF INCOMPLETE NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

A filing date has NOT been accorded to the above-identified application papers for the reason(s) indicated below.

All of the items noted below and a newly executed oath or declaration covering the items must be submitted within **TWO MONTHS** of the date of this Notice, unless otherwise indicated, or proceedings on the application will be terminated (37 CFR 1.53(e)). Replies should be mailed to: Mail Stop Missing Parts, Commissioner for Patents, P.O. Box 1450, Alexandria VA 22313-1450.

The filing date will be the date of receipt of all items required below, unless otherwise indicated. Any assertions that the item(s) required below were submitted, or are not necessary for a filing date, must be by way of petition directed to the attention of the Office of Petitions accompanied by the \$130.00 petition fee (37 CFR 1.17(h)). If the petition states that the application is entitled to a filing date, a request for a refund of the petition fee may be included in the petition. Petitions should be mailed to: Mail Stop Petitions, Commissioner for Patents, P.O. Box 1450, Alexandria VA 22313-1450.

- The application was deposited without drawings. 35 U.S.C. 113 (first sentence) requires a drawing "where necessary for the understanding of the subject matter sought to be patented." *Applicant should reconsider whether the drawings are necessary under 35 U.S.C. 113 (first sentence).*
- The oath or declaration is unsigned.

Replies should be mailed to: Mail Stop Missing Parts
 Commissioner for Patents
 P.O. Box 1450
 Alexandria VA 22313-1450

*A copy of this notice **MUST** be returned with the reply.*

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Initial Patent Examination Division (703) 308-1202

PART 2 - COPY TO BE RETURNED WITH RESPONSE

CLAIMS

What is claimed:

1. A superabsorbent polymer comprising
 - a) a polymeric resin composition comprising
 - 5 i) from about 55 to about 99.9 wt.% of polymerizable unsaturated acid group containing monomers;
 - ii) from about 0.001 to about 5.0 wt.% of an internal crosslinking agent;
 - iii) from 0 to 25 wt % of a preneutralizing agent; wherein the polymeric resin composition is preneutralized from 0 to about 50 mole %; and
 - 10 b) a water swellable, water-insoluble aminopolysaccharide polymer;wherein when the superabsorbent polymer is contacted with an aqueous solution, the polymeric resin is neutralized by the aminopolysaccharide polymer so that the superabsorbent polymer has a degree of neutralization of about 20 mole % or more than the preneutralization degree of the polymeric resin composition.
- 15
2. The superabsorbent polymer of Claim 1 having a gel bed permeability of $100 \times 10^{-9} \text{ cm}^2$ or greater.
3. The superabsorbent polymer of Claim 1 having a liquid capacity of about
20 20 g/g or greater.

4. The superabsorbent polymer of Claim 1 having a liquid capacity of about 25 g/g or greater.
5. The superabsorbent polymer of Claim 1 having a Gel Bed Permeability of about $200 \times 10^{-9} \text{ cm}^2$ or greater.
6. The superabsorbent polymer of Claim 1 having a Gel Bed Permeability of about $300 \times 10^{-9} \text{ cm}^2$ or greater.
- 10 7. The superabsorbent polymer of Claim 1 further comprising from about 0.001 to about 5.0 wt.% of surface crosslinking agent applied to the particle surface.
8. The superabsorbent of Claim 1 is a mixture of aminopolysaccharide and the polymeric resin in a weight ratio of about 5:95 to about 95:5, and the
15 aminopolysaccharide is neutralized from 0 to about 25 mole %.
9. The superabsorbent polymer of Claim 1 wherein the aminopolysaccharide polymer is a chitosan polyamine.
- 20 10. The superabsorbent polymer of Claim 1 further comprising a surface

treatment.

11. The superabsorbent polymer of Claim 10 having a AUL(0.9psi) of 15 or more and GBP of $450 \times 10^{-9} \text{ cm}^2$ or greater.

5

12. A superabsorbent polymer comprising:

a) from about 1 to about 99 wt.% of crosslinked polyacrylic acid resin wherein the polyacrylic acid resin is preneutralized from 0 to about 50 mole %; and

b) from about 1 to about 99 wt.% of water swellable, water-insoluble
10 aminopolysaccharide polymer.

wherein when the superabsorbent polymer is contacted with an aqueous solution, the crosslinked polyacrylic acid resin is neutralized by the aminopolysaccharide polymer so the superabsorbent polymer has a degree of neutralization of about 20 mole % or more than the preneutralization degree of the polyacrylic acid resin.

15

13. The superabsorbent polymer of Claim 12 wherein the crosslinked polyacrylic acid has a degree of neutralization of 30 mole % or more.

14. The superabsorbent polymer of Claim 12 having a liquid capacity of about
20 20 g/g or greater.

15. The superabsorbent polymer of Claim 12 having a liquid capacity of about 25 g/g or greater.

16. The superabsorbent polymer of Claim 12 having a Gel Bed Permeability
5 of about $200 \times 10^{-9} \text{ cm}^2$ or greater.

17. The superabsorbent polymer of Claim 12 having a Gel Bed Permeability
of about $300 \times 10^{-9} \text{ cm}^2$ or greater.

10 18. The superabsorbent polymer of Claim 12 further comprising from about 0.001 to about 5.0 wt.% of surface crosslinking agent applied to the particle surface.

19. The superabsorbent polymer of Claim 18 having a AUL(0.9psi) of 15 or more and GBP of $450 \times 10^{-9} \text{ cm}^2$ or greater.

15

20. The superabsorbent polymer of Claim 10 wherein the aminopolysaccharide polymer is chitosan.

21. An absorbent composite comprising a superabsorbent polymer comprising:

20 a) a polymeric resin composition comprising

i) from about 55 to about 99.9 wt.% of polymerizable unsaturated acid group
containing monomers;

ii) from about 0.001 to about 5.0 wt.% of internal crosslinking agent;

iii) from 0 to 25 wt % of a preneutralizing agent; wherein the polymeric resin
5 composition is preneutralized from 0 to about 50 mole %; and

b) a water swellable, water-insoluble aminopolysaccharide polymer;

wherein when the superabsorbent polymer is contacted with an aqueous solution,
the polymeric resin composition is neutralized by the water swellable, water-insoluble
aminopolysaccharide polymer and the superabsorbent polymer has a degree of
10 neutralization of about 20 mole % or more than the preneutralized amount of the
polymeric resin composition.

22. The absorbent composite of Claim 21 wherein the superabsorbent polymer
has a liquid capacity of about 20 g/g or greater.

15

23. The absorbent composite of Claim 21 wherein the superabsorbent polymer
has a liquid capacity of about 25 g/g or greater.

24. The absorbent composite of Claim 21 wherein the superabsorbent polymer
20 has a Gel Bed Permeability of about $200 \times 10^{-9} \text{ cm}^2$ or greater.

25. The absorbent composite of Claim 21 wherein the superabsorbent polymer has a Gel Bed Permeability of about $300 \times 10^{-9} \text{ cm}^2$ or greater.

5 26. The absorbent composite of Claim 21 wherein the superabsorbent polymer further comprises from about 0.001 to about 5.0 wt.% of surface crosslinking agent applied to the particle surface.

10 27. The absorbent composite of Claim 21 having a AUL(0.9psi) of 15 or more and GBP of $450 \times 10^{-9} \text{ cm}^2$ or greater.

 28. The absorbent composite of Claim 21 wherein the aminopolysaccharide polymer is a chitosan.

15 29. An absorbent composite of Claim 21 further comprising a mixture of fibers.

 30. A process for the continuous production of superabsorbent polymer composition for absorbing aqueous or serous fluids, as well as blood, comprising the
20 steps of:

a) preparing a polymeric resin composition by reacting

i) from about 55 to about 99.9 wt.-% of polymerizable unsaturated acid group containing monomers; and

ii) from about 0.001 to about 5.0 wt.-% of internal crosslinking agent; and

5 iii) from 0 to 25 wt % of a preneutralizing agent; wherein the polymeric resin composition is preneutralized from 0 to about 50 mole %; and

b) preparing an aqueous solution containing a water swellable, water-insoluble aminopolysaccharide polymer;c) mixing the polymeric resin composition with the aqueous solution containing aminopolysaccharide polymer to form the superabsorbent polymer; and

10 d) drying the superabsorbent polymer

wherein when the superabsorbent polymer is contacted with an aqueous solution, the polymeric resin composition is neutralized by the aminopolysaccharide polymer so the polymeric resin composition is neutralized by the water swellable, water-insoluble aminopolysaccharide polymer such that the superabsorbent polymer has a degree of
15 neutralization of about 20 mole % of more than the preneutralization degree of the polymeric resin.

31. The process of Claim 30 wherein the aminopolysaccharide polymer is chitosan.

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